REMARKS

Obvious inadvertent clerical and typographical errors in the Specification are corrected in the present Amendment. Certain claims have been amended for improved clarity and/or to eliminate multiple dependencies. None of the amendments made herein constitutes the addition of new matter.

The Specification

The Patent Office has requested correction of inadvertent errors in the Specification, including at page 4, line 35, and page 20, line 20. Applicants have endeavored to correct inadvertent typographical and clerical errors in the recitation of sequence identifiers in the Specification and in the claims. At page 4, line 35, "mads" is rewritten as "MADS", and at page 20, line 20, "1.46" is rewritten as "1.40", as supported by Figure 2. Inadvertent errors in the recitation of sequence identifiers have been corrected.

The Abstract

The Patent Office has required presentation of an Abstract of the Disclosure. An abstract is submitted on a separate sheet, page 5 hereof, in accordance with Patent Office requirements. The Abstract presented herein is substantially identical to that of the published International Application. The content of the Abstract is supported by the as-filed application, especially the Summary of the Invention and the Claims.

The Claims

Claim 8 has been objected to as improper in form. Claim 8 has been amended for proper dependency.

Claims 8 and 24 have been objected to for employing incorrect sequence identifiers. Applicants have made the necessary corrections in the present submission.

Claims 27 and 30 have been objected to for employing improper Markush terminology. Applicants have made the necessary amendments in the present submission.

The Rejections under 35 U.S.C. 101

Claims 1-3 have been rejected under 35 U.S.C. 101 as allegedly having the same characteristics and utility as those found naturally in the genome or as cellular precursors thereof. Applicants respectfully traverse this rejection.

The Examiner has recommended amendment of the claim to recite "an isolated" DNA molecule to distinguish it from a product of nature.

In the interest of advancing prosecution and without acquiescing to the rejection, Applicants have amended claims 1-3 by the addition of "isolated" as suggested by the Examiner. It was never Applicants' intent for the claims to read on a product of nature.

In view of the foregoing, the withdrawal of the rejection under Section 101 is respectfully requested.

The Rejections under 35 U.S.C. 112, second paragraph

Claims 1 and 4-30 have been rejected as allegedly indefinite. Applicants respectfully traverse this rejection.

Claim 1 is allegedly indefinite in the recitation of "that nucleotide sequence" in line 3. and for the recitation of "thereof" in line 4. The Examiner has requested clarification of whether "that nucleotide sequence" refers to SEQ I DNO:1 or to a nucleotide sequence encoding a peptide and whether "thereof" relates to the promoter or the coding sequence.

In the interest of advancing prosecution, Applicants have amended the claim for improved clarity.

Claims 4-5 are allegedly indefinite in failing to specify the relationship between claim elements.

In the interest of advancing prosecution and without acquiescing to the rejection, Applicants have amended claims 4-5 to recite "as operably linked components," as suggested by the Examiner.

Claim 5 is allegedly indefinite in part (a) in the recitation of "90% homology ... as given in SEQ ID NO:2, as it unclear whether the promoter has the 90% homology or whether the promoter has SEQ ID NO:2.

In the interest of advancing prosecution, Applicants have amended claim 5 to clarify the sequence information.

In view of the amendments to the claims, Applicants submit that the requirements of Section 112, second paragraph, are met and respectfully request the withdrawal of the rejections.

The Rejections under 35 U.S.C. 112, first paragraph

Claims 1-2 and 4-30 have been rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement. Applicants respectfully traverse this rejection.

The Patent Office has alleged that the claims are broadly drawn to a promoter comprising a polynucleotide of any length and any sequence and from any source which is functionally equivalent variant of SEQ ID NO:1 or a polynucleotide with at least 90% homology to SEQ ID NO:1 or a or a polynucleotide of SEQ ID NO:1, which comprises nucleotides 1-1320 of Fig. 2 and plants transformed therewith. However, it has been

alleged that the specification only provides guidance for a promoter which comprises at least nucleotides 1-1401 of Fig. 2 (SEQ ID NO:2).

Applicants respectfully note that the Specification states at page 1, lines 28-33, that nucleotides 1-1320 of Fig. 2 (or a sequence of at least 90% nucleotide sequence homology) functions as a promoter. In addition, claim 1 as amended specifies that the sequence should have at least 95% sequence identity with SEQ ID NO:1 (which corresponds to nucleotides 1-1320 of Fig. 2) and the promoter activity. This does not encompass a polynucleotide of "any length" or of "any sequence" Applicants, therefore made a written description that is readily understood by and accessible to one of ordinary skill in the art. Claim 4 similarly specifies the 95% sequence identity limitation and the requirement for expression specifically in reproductive tissue. Again, the skilled artisan understands what the Applicants see as the invention and can readily test particular potential embodiments to determine whether or not they fall within the scope of the claims. The sequence limitation is a structural limitation, and the requirement in claim 1 for promoter is a functional limitation. Methods for testing for the requisite sequence homology and the requisite functionality are presented. Accordingly, the skilled artisan understands that the inventors were in possession of the invention as claimed.

In view of the foregoing, the withdrawal of this rejection is respectfully requested.

Claims 1-2 and 4-30 have been rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement. Applicants respectfully traverse this rejection.

The claims as amended specify that the promoter is SEQ ID NO:1 or a sequence with at least 95% homology thereto and having the same function. As noted above, SEQ ID NO:1 corresponds to nucleotides 1-1320 of Fig. 2 (or the same nucleotides of SEQ ID NO:2). Applicants have provided structural limitation in the recitation of the nucleotide

sequence homology and functional limitation in terns of the recitation of promoter activity and plant reproductive tissue specific promoter activity. The skilled artisan can identify polynucleotides within the scope of the claims by taking the teachings of the Specification together with what is well known to the art to practice the claimed invention without the expense of undue experimentation. By making and testing polynucleotides within the scope of the claims, the skilled artisan can reject those polynucleotides which do not have the recited functionality. Those polynucleotides lacking the recited functionality do not fall within the scope of the claims.

With respect to claims 4-11 and 16, the Patent Office has alleged that the Specification only provides guidance for sense constructs for the production of sterile plants and that there is no guidance related to antisense constructs.

Applicants respectfully submit that one of ordinary skill in the art can make and test antisense constructs for functionality without the expense of undue experimentation.

In view of the foregoing, the withdrawal of this rejection is respectfully requested.

The Rejections under 35 U.S.C. 102

Claims 1-2, 4, 6, 9, and 11 have been rejected under 35 U.S.C. 102(b) as allegedly anticipated by Tandre et al. (1998) in light of Tandre et al. (1995). Applicants respectfully traverse this rejection.

The Patent Office has stated that the claims are drawn to a promoter which is a functionally equivalent variant of a *Pinus radiata* AGAMOUS promoter, constructs comprising the promoter operably linked to an open reading frame in a sense orientation where the open reading frames causes abortion of reproductive structures. In the interest of advancing prosecution and without acquiescing to the rejection, Applicants have limited that claims to sequences with at least 95% nucleotide sequence homology to the inventive

sequences and having the specific promoter and/or tissue specific activity of the transcription regulatory sequences of the present invention.

Tandre (1998) is said to teach genomic clones of a Norway spruce AGAMOUS homologue. The Examiner has concluded that this spruce promoter is functionally equivalent to the pine promoter, in view of the 88.6% local similarity as demonstrated by Tandre et al. (1995).

In the interest of advancing prosecution and without acquiescing to the rejection, Applicants have amended claims 1 and 2 to recite sequences of at least 95% identity to that of SEQ ID NO:1. Moreover, the sequence comparison provided by the Examiner covers only about 257 nucleotides, much less that 95% of the 1320 nucleotides of SEQ ID NO:1. Thus, the Tandre reference does not anticipate the invention as claimed. The Examiner has provided no evidence, nor is there any within the cited Tandre (1998) reference, that there is promoter activity within the noted region of the maximum sequence similarity.

In any event, the Examiner has states that claims reciting sequences with at least 90% nucleotide sequence identity to SEQ ID NO:1 are free of the prior art. Accordingly the invention is not anticipated by the cited prior art, and the rejection should be withdrawn.

In view of the foregoing and in view of the amendments to the claims, Applicants respectfully maintain that the invention as claimed is not anticipated by the cited reference and the rejection must be withdrawn.

Claims 1-2, 4, 6-7, 9-14, 16 and 21-23 have been rejected as allegedly anticipated by WO 98/13503. Applicants respectfully traverse this rejection.

The cited reference is said to teach pine and eucalyptus genes encoding MADS box-containing proteins, wherein said genes are preferentially expressed in reproductive

structures and wherein expression directed by these promoters of the coding sequence in antisense orientation or a barnase gene in the sense orientation leads to abortion of reproductive structures.

Applicants respectfully point out that the focus of the present invention is a particular reproductive tissue specific promoter. The Examiner has stated that claims reciting sequences of at least 90% nucleotide sequence identity to SEQ ID NO:1 are free of the prior art. All of the claims (as currently or previously amended) relate to 95% identical sequences. Accordingly, the claims are not anticipated by the prior art and the rejection should be withdrawn.

Claims 1-2, 4, 6-7, 9-14, 16 and 21-23 have been rejected under 35 U.S.C. 102(a) as allegedly anticipated by U.S. Patent 6,395,892, Strauss et al., effectively filed April 6, 1998). Applicants respectfully traverse this rejection.

All of the rejected claims have been limited to the use of sequences having at lest 95% nucleotide sequence homology with SEQ ID NO:1 (and having functional equivalence). The Examiner has stated that such sequences are free of the prior art. Accordingly, Applicants respectfully maintain that the cited reference does not anticipate the claimed invention and the rejection should be withdrawn.

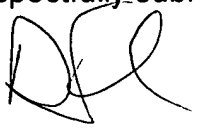
Conclusion

In view of the foregoing, it is submitted that this case is in condition for allowance, and passage to issuance is respectfully requested.

If there are any outstanding issues related to patentability, the courtesy of a telephone interview is requested, and the Examiner is invited to call to arrange a mutually convenient time.

This Amendment is accompanied by a Petition for Extension of Time and a check in the amount of $110.00. It is believed that this amendment does not necessitate the payment of any additional fees or additional extensions of time under 37 C.F.R. 1.16-1.17. If this is incorrect, however, please charge any deficiency or credit any overpayment of fees due under the foregoing Rules to Deposit Account No. 07-1969.

Respectfully submitted,



Donna M. Ferber
Reg.No. 33,878

GREENLEE, WINNER AND SULLIVAN, P.C.
5370 Manhattan Circle, Suite 201
Boulder, CO 80303
Telephone (303) 499-8080
Facsimile: (303) 499-8089
Email: winner@greenwin.com

Attorney docket No.103-01
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